

# **EXHIBIT 10**

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

BEARBOX LLC and AUSTIN STORMS,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	C.A. No. 21-534-MN
	)	
LANCIUM LLC, MICHAEL T. MCNAMARA,	)	
and RAYMOND E. CLINE, JR.,	)	
	)	
Defendant.	)	

**DEFENDANTS' SECOND SUPPLEMENTAL RESPONSE TO  
PLAINTIFFS' INTERROGATORY NO. 3**

Pursuant to Rules 26 and 33 of the Federal Rules of Civil Procedure and the Local Rules of this Court, Defendants Lancium LLC, Michael T. McNamara, and Raymond E. Cline, Jr., (collectively, "Defendants"), by their undersigned attorneys, hereby provide the following supplemental response to Plaintiffs BearBox, LLC and Austin Storms' (collectively, "Plaintiffs") Interrogatory No. 3 served on June 9, 2021 as follows:

**PRELIMINARY STATEMENT**

Defendants' supplemental response to Plaintiffs' Interrogatory No. 3 is made to the best of Defendants' present knowledge, information, and belief. Defendants' investigation of the facts are ongoing, and Defendants reserve the right to supplement or amend these responses pursuant to the Federal Rules of Civil Procedure, the local rules, the Court's Default Standard for Discovery, Including Discovery of Electronically Stored Information ("ESI"), the Court's Scheduling Order (D.I. 35) and Amended Scheduling Order (D.I. 35), and any other applicable orders. Defendants' responses are not admissions, concessions, or waivers as to the existence, relevance, materiality, foundation, or admissibility of any documents or information.

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

**GENERAL OBJECTIONS**

1. Defendants' responses are made to the best of their present knowledge, information, and belief. Defendants' investigation of the facts are ongoing, and Defendants reserve the right to supplement or amend the responses pursuant to the Federal Rules of Civil Procedure, the local rules, and any scheduling order entered in this case.

2. Defendants object to the Interrogatories to the extent they seek information or documents that are outside the possession, custody or control of the Defendants. Defendants further object to the definition of "Lancium," "You," and "Your" to the extent it includes "all of Lancium LLC's predecessors, predecessors-in-interest, successors, successors-in-interest, subsidiaries, parents, and affiliates, all entities acting in joint venture, licensing or partnership with one or more of the aforementioned, and all past or present directors, officers, agents, representatives, employees, consultants, attorneys, and others acting on behalf of one or more of the aforementioned." Defendants will provide discovery responses on behalf of the named Defendants that can be located upon a reasonable search and investigation proportional to the needs of the case.

3. Defendants object to the Interrogatories to the extent they seek information or documents that are not within Defendants' possession, custody, or control; to prepare information or documents that do not already exist; or to produce documents or information in a format other than that in which it is ordinarily kept by Defendants. To the extent Defendants agree to produce documents in response to any Interrogatory, it will do so (to the extent documents exist) after performing a reasonable search and investigation proportional to the needs of the case running up

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

to the date Plaintiffs filed its Amended Complaint. Nothing contained in any response herein shall be deemed an admission that any responsive documents exist.

4. Defendants object to the Interrogatories to the extent such Interrogatory seeks the production of information or documents protected by any right to privacy, confidentiality obligations, protective order, or other agreement or obligation not to disclose such document or information.

5. Defendants object to the Interrogatories and to the Definitions and Instructions to the extent they request emails or other electronically stored information in a manner that is inconsistent with any Electronically Stored Information (“ESI”) order entered in this action. Defendants will comply with any ESI order once entered in this action.

6. Defendants object to the Interrogatories to the extent they are indeterminate with respect to time and to the extent they seek to impose unreasonable burdens on Defendants based on excessive time scope.

7. Defendants object to the Interrogatories to the extent they seek information or documents protected from discovery by any privilege or immunity, including but not limited to the attorney-client privilege, the attorney work product doctrine/immunity, the joint defense privilege, the common interest privilege or community of interest privilege, or any other applicable privilege, immunity, protection or exemption from disclosure, or information or documents otherwise protected from disclosure under the Federal Rules of Civil Procedure, the Federal Rules of Evidence, or relevant statutory or case law. Production of information or documents subject to such privilege, protection, or immunity in response to any of the Interrogatories is inadvertent and shall not constitute or be deemed to constitute a waiver of such privilege, protection, or immunity.

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

8. Defendants object to Definition and Instruction K (“Relate to,” “Relating to,” or Related to”) as overly broad, unduly burdensome, and ambiguous, particularly the portions of the definition “referring directly or indirectly to, dealing with, or in any way pertaining to.” Such descriptions are subjective, unhelpful, and expand the scope of discovery beyond what is appropriate in this case.

9. Nothing contained in any response herein shall be deemed to be an admission, concession, or waiver by Defendants as to the relevance, competency, materiality, foundation, or admissibility of any document or information provided in response to Plaintiffs’ Requests.

10. To the extent any Interrogatory calling for “all,” “each,” or “every” piece of information as being overly broad and unduly burdensome. It is impossible, to represent, even after a reasonable and diligent search, that all, each, and every piece of information or document falling within a description can be or has been assembled.

**RESPONSE TO INTERROGATORIES**

**INTERROGATORY NO. 3:**

Describe in detail the development of each invention claimed in the ’433 Patent including the conception, reduction to practice, and any other development activities for each claimed invention. A complete response to this Interrogatory should include an identification, on a claim-by-claim and element-by-element basis, of which of the purported inventors named on the ’433 Patent conceived of the claimed inventions, reduced the claimed inventions to practice, or otherwise contributed to the development of the claimed inventions, including the dates of each of these activities and an identification of all documents or other evidence that support Your contentions.

**ANSWER:**

Defendants object to this Interrogatory as premature, overly broad, unduly burdensome, and not proportional to the needs to the case considering the importance of discovery in resolving the issues and whether the burden or expense of the proposed discovery outweighs its likely

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

benefit. In particular, Plaintiffs bear the burden of proof on their inventorship claims and per the Court's Scheduling Order, D.I. 35, "contention interrogatories, if filed, shall first be addressed by the party with the burden of proof" and "the more detail a party provides, the more detail a party shall receive," but Plaintiffs have provided only a cursory explanation of their claims. Defendants further object to this Interrogatory as seeking an identification of "all documents or other evidence that support Your contentions" because this is not proportional to the needs of the case and it is unduly burdensome, if even possible, to locate, identify, and describe every such document or piece of "evidence" within the scope of this Interrogatory. Defendants also object to this Interrogatory as irrelevant, overly broad, and unduly burdensome by requesting a detailed description of "which of the purported inventors named on the '433 Patent" conceived, reduced to practice, or otherwise contributed to the claimed inventions because Plaintiffs have not pleaded claims challenging the comparative contributions of the named inventors; Plaintiffs' claims are based only upon the non-inclusion of Austin Storms as a purported inventor of the '433 Patent. Defendants also object to this Interrogatory as irrelevant, vague, ambiguous, overly broad, and unduly burdensome by requesting a detailed description of "reduc[ing] the claimed inventions to practice" and any "contribut[ion] to the development of the claimed inventions" of the '433 Patent because inventorship is based upon contribution to conception of a claimed invention. Defendants object to the use of the term "Your" as defined by Plaintiffs, as overbroad because it includes "all of Lancium LLC's predecessors, predecessors-in-interest, successors, successors-in-interest, subsidiaries, parents, and affiliates, all entities acting in joint venture, licensing or partnership with one or more of the aforementioned, and all past or present directors, officers, agents, representatives, employees, consultants, attorneys, and others acting on behalf of one or more of the aforementioned"; Defendants provide discovery responses on

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

behalf of Lancium LLC and the named Defendants only. Defendants still further object to this Interrogatory to the extent it seeks information, documents, and communications protected by attorney-client privilege, work product privilege, or other privilege or immunity.

Subject to and without waiver of the foregoing objections, and based upon Defendants' investigation to date, Defendants respond as follows: Michael T. McNamara ("McNamara"), Lancium LLC's Chief Executive Officer, co-founded the company in 2017 as a technology company working to create software and intellectual property solutions that enable more renewable energy on the nation's power grid. Raymond E. Cline, Jr. ("Cline") joined Lancium LLC ("Lancium") in late 2017 as its Chief Computing Officer and currently serves as Lancium's Chief Technology Officer. Since 2017, McNamara and Cline have worked together to continue innovating in the field of data center power ramping software, including power ramping for cryptocurrency mining operations, and their work has led to numerous issued patents, including the following:

- U.S. Patent No. 10,873,211 (filed Sept. 13, 2018) "Systems and Methods for Dynamic Power Routing with Behind-the-Meter Energy Storage";
- U.S. Patent No. 10,444,818 (filed Oct. 30, 2018) "Methods and Systems for Distributed Power Control of Flexible Datacenters";
- U.S. Patent No. 10,367,353 (filed Oct. 30, 2018) "Managing Queue Distribution between Critical Datacenter and Flexible Datacenter";
- U.S. Patent No. 10,452,127 (filed Jan. 11, 2019) "Redundant Flexible Datacenter Workload Scheduling";
- U.S. Patent No. 10,618,427 (filed Oct. 8, 2019) "Behind-the-Meter Branch Loads for Electrical Vehicle Charging;
- U.S. Patent No. 10,608,433 (filed Dec. 4, 2019) "Methods and Systems for Adjusting Power Consumption Based on a Fixed-Duration Power Option Agreement";
- U.S. Patent No. 10,857,899 (filed Mar. 4, 2020) "Behind-the-Meter Branch Loads for Electrical Vehicle Charging"; and
- U.S. Patent No. 11,016,456 (filed Feb. 13, 2018) "Method and System for Dynamic Power Delivery to a Flexible Datacenter Using Unutilized Energy Sources."

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

As demonstrated by their documented history of innovation, McNamara and Cline's work progressively led to the conception of the inventions claimed in the '433 Patent, which occurred prior to the filing on October 28, 2019, of provisional application no. 62/927,119, to which the '433 Patent claims priority. McNamara and Cline's conception of the inventions claimed in the '433 Patent also occurred independently of and without any contribution by Austin Storms.

Discovery in this litigation is also in its early stages, and Defendants' investigation regarding the subject matter of this Interrogatory is ongoing. Accordingly, Defendants reserve the right to amend or supplement this response as additional information becomes available, including by identifying documents pursuant to Federal Rule of Civil Procedure 33(d).

**FIRST SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 3:**

Subject to and without waiver of the foregoing objections, Plaintiffs have, thus far, failed to meaningfully identify any element of any claim of the '433 patent that "falls within the scope of the BearBox Technology" as alleged in paragraph 4 of the Amended Complaint as requested by Defendants in, for example, Defendants' Interrogatory No. 3. Instead, Plaintiffs produced a chart that, for each claim element, simply states "Austin Storms conceived and developed technology" and then essentially parrots the language of each claim element. Plaintiffs also state they will produce documents sufficient to respond to the Interrogatory under Fed. R. Civ. P. 33(d). But Plaintiffs identify no specific documents from their production that they contend are responsive to Defendants' Interrogatory No. 3 and thus have failed to comply with Rule 33(d).

Plaintiffs also state that Mr. Storms verbally communicated information to Mr. McNamara, but provide no details regarding when those communications allegedly took place and/or the circumstances surrounding them. *See, e.g.*, Plaintiffs' Supplemental Answer to Defendants' Interrogatory No. 1. With respect to the substance of the alleged conversation(s), Plaintiffs cherry



ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

pick certain words/phrases, identify public electrical grid operators (*e.g.*, the Electric Reliability Council of Texas (“ERCOT”), the Midcontinent Independent System Operation (“MISO”), and the Southwest Power Pool (“SPP”)), and recite concepts such as it is advantageous to mine cryptocurrency when power is inexpensive as evidence that Mr. Storms allegedly told Mr. McNamara information that (1) Mr. McNamara did not already know, and (2) Mr. Storms should be a named inventor on the ’433 patent. Such high-level statements, however, are not fully responsive to Defendants’ Interrogatories.

It is black-letter law that a person seeking to add himself as an inventor “must meet the heavy burden of proving [his] case by clear and convincing evidence.” *See Scott v. Zimmer, Inc.*, 889 F. Supp. 2d 657, 662 (D. Del. 2012). A purported inventor must show that he made a contribution to the claimed invention that is not insignificant in quality, when that contribution is measured against the dimension of the full invention, and did more than merely explain to the real 11 inventor(s) well-known concepts and/or the current state of the art. *See Acromed Corp. v. Sofamor Danek Group, Inc.*, 253 F.3d 1371, 1379 (Fed. Cir. 2001); *Scott*, 889 F. Supp. 2d at 662. A purported inventor’s uncorroborated testimony, moreover, cannot, by itself, rise to the level of clear and convincing evidence. *Acromed*, 253 F.3d at 1379; *Scott*, 889 F. Supp. 2d at 663. Further, as noted above, per the Court’s Scheduling Order (D.I. 35) “contention interrogatories, if filed, shall first be addressed by the party with the burden of proof” and “the more detail a party provides, the more detail a party shall receive.” To date, Plaintiffs have not provided a meaningful identification of any aspects of the claimed inventions of the ’433 patent that Plaintiffs allegedly shared with Mr. McNamara. Nor have Plaintiffs identified any corroboration of any alleged conversations with Mr. McNamara (or anyone else from Lancium) where such yet-to-be-identified aspects were allegedly communicated to Mr. McNamara. Defendants, therefore, continue to object

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

to this Interrogatory as premature, unduly burdensome, and overly broad. Once Plaintiffs identify with particularity the elements of the '433 patent's claims for which Mr. Storms maintains he provided Mr. McNamara information (*e.g.*, identify the specific details of the alleged BearBox technology Plaintiffs contend are covered by the claims of the '433 patent that Mr. Storms purportedly shared with Mr. McNamara, and provide corroboration for each such identification), Defendants will further supplement this Response.

Notwithstanding the foregoing, and reserving all objections and reserving the right to further supplement as Defendants' investigation continues and if/when Plaintiffs fully respond to Defendants Interrogatories as discussed above, Defendants further respond that Lancium, Mr. McNamara, and Dr. Cline have been continuously developing their technology and intellectual property since at least 2017. By no later than April 2019, Messrs. McNamara and Cline were aware of Loads as a Resource ("LAAR") and programs associated therewith, including, for example, utilizing software to turn cryptocurrency miners on and off in response to the price/demand for electricity. By no later than April of 2019, Messrs. McNamara and Cline had conceived of and reduced to practice technology capable of dynamic power delivery to flexible datacenters, including the ability to ramp up and down one or more computing systems (*i.e.*, to instruct cryptocurrency miners, for example, to mine or not to mine under certain conditions). Certain aspects of this technology are described in PCT Publication Number WO 2019/139632 A1 (the "'632 application"), LANCIUM00000050-93, which is a publication from an application filed on February 13, 2018 that eventually issued as U.S. Patent No. 11,016,456. *See also, e.g.*, LANCIUM00014483, LANCIUM00014493, LANCIUM00014517, LANCIUM00014524, LANCIUM00014533, LANCIUM00014534, LANCIUM00014543, LANCIUM00014552, LANCIUM00014559, LANCIUM00014579, LANCIUM00014586, LANCIUM00014595,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00014603, LANCIUM00014612, LANCIUM00014619, LANCIUM00014628,  
LANCIUM00014653, LANCIUM00014662, LANCIUM00014671, LANCIUM00014672,  
LANCIUM00014701, LANCIUM00014702, LANCIUM00014732, LANCIUM00014733,  
LANCIUM00014764, LANCIUM00014825, LANCIUM00014832, LANCIUM00014841,  
LANCIUM00014844, LANCIUM00014864, LANCIUM00015026, LANCIUM00015027,  
LANCIUM00015046, LANCIUM00015048, LANCIUM00015108, LANCIUM00015109,  
LANCIUM00015128, LANCIUM00015129, LANCIUM00015148, LANCIUM00015150,  
LANCIUM00015154, LANCIUM00015169, LANCIUM00015170, LANCIUM00015238,  
LANCIUM00015241, LANCIUM00015260, LANCIUM00015339, LANCIUM00015452,  
LANCIUM00015456, LANCIUM00015503, LANCIUM00015595, LANCIUM00015604,  
LANCIUM00015717, LANCIUM00015798, LANCIUM00015911, LANCIUM00015912,  
LANCIUM00015931, LANCIUM00015932, LANCIUM00015982, LANCIUM00015989,  
LANCIUM00015998, LANCIUM00015999, LANCIUM00016051, LANCIUM00016055,  
LANCIUM00016069, LANCIUM00016072, LANCIUM00016086, LANCIUM00016088,  
LANCIUM00016102, LANCIUM00016105, LANCIUM00016119, LANCIUM00016121,  
LANCIUM00016135, LANCIUM00016136, LANCIUM00016168, LANCIUM00016169,  
LANCIUM00016201, LANCIUM00016204, LANCIUM00016218, LANCIUM00016219,  
LANCIUM00016228, LANCIUM00016229, LANCIUM00016241, LANCIUM00016256,  
LANCIUM00016257, LANCIUM00016260, LANCIUM00016261, LANCIUM00016264,  
LANCIUM00016267, LANCIUM00016268, LANCIUM00016292, LANCIUM00016316,  
LANCIUM00016317, LANCIUM00016341, LANCIUM00016342, LANCIUM00016366,  
LANCIUM00016368, LANCIUM00016436, LANCIUM00016437, LANCIUM00016448.

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

Defendants further state that by no later than April 2019, Messrs. McNamara and Cline were aware of market pricing and market structure for wholesale electricity pricing, the relationship between Qualified Scheduling Entities (“QSEs”) and Independent System Operators such as ERCOT, including that a Load Resource must register with ERCOT as a Resource Entity and be represented in the ERCOT markets by a QSE. *See, e.g.,* [www.ercot.com/services/programs/load/laar/index.html](http://www.ercot.com/services/programs/load/laar/index.html), LANCNUM00014480, LANCNUM00016267, LANCNUM00016292, LANCNUM00016316, LANCNUM00016317, LANCNUM00016341, LANCNUM00016342, LANCNUM00016436, LANCNUM00016437, LANCNUM00016436, LANCNUM00016448. In addition, by no later than April 2019, Messrs. McNamara and Cline were aware of real-time pricing for electricity, the functions and interactions of QSEs with ERCOT, the use of cryptocurrency miners as a Load for qualification as a Load Resource, and that to qualify as a Load Resource required the ability to change a load in response to an instruction to meet certain performance requirements. *See* [www.ercot.com/services/programs/load/laar/index.html](http://www.ercot.com/services/programs/load/laar/index.html). Additionally, by no later than April 2019, Messrs. McNamara and Cline were aware that cryptocurrency could be mined, that hash rates could be calculated for such mining, that cryptocurrency could be traded, that there was realtime information available on the price of cryptocurrency in dollars, and that this information could be utilized in conjunction with information regarding the price and/or projected price of electricity in determining when to mine or not to mine cryptocurrency. *See, e.g.,* LANCNUM00014483, LANCNUM00014493, LANCNUM00014517, LANCNUM00014524, LANCNUM00014533, LANCNUM00014534, LANCNUM00014543, LANCNUM00014552, LANCNUM00014559, LANCNUM00014579, LANCNUM00014586, LANCNUM00014595, LANCNUM00014603, LANCNUM00014612, LANCNUM00014619, LANCNUM00014628,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00014653, LANCUM00014662, LANCUM00014671, LANCUM00014672,  
LANCIUM00014701, LANCUM00014702, LANCUM00014732, LANCUM00014733,  
LANCIUM00014764, LANCUM00014825, LANCUM00014832, LANCUM00014841,  
LANCIUM00014844, LANCUM00014864, LANCUM00015026, LANCUM00015027,  
LANCIUM00015046, LANCUM00015048, LANCUM00015108, LANCUM00015109,  
LANCIUM00015128, LANCUM00015129, LANCUM00015148, LANCUM00015150,  
LANCIUM00015154, LANCUM00015169, LANCUM00015170, LANCUM00015238,  
LANCIUM00015241, LANCUM00015260, LANCUM00015339, LANCUM00015452,  
LANCIUM00015456, LANCUM00015503, LANCUM00015595, LANCUM00015604,  
LANCIUM00015717, LANCUM00015798, LANCUM00015911, LANCUM00015912,  
LANCIUM00015931, LANCUM00015932, LANCUM00015982, LANCUM00015989,  
LANCIUM00015998, LANCUM00015999, LANCUM00016051, LANCUM00016055,  
LANCIUM00016069, LANCUM00016072, LANCUM00016086, LANCUM00016088,  
LANCIUM00016102, LANCUM00016105, LANCUM00016119, LANCUM00016121,  
LANCIUM00016135, LANCUM00016136, LANCUM00016168, LANCUM00016169,  
LANCIUM00016201, LANCUM00016204, LANCUM00016218, LANCUM00016219,  
LANCIUM00016228, LANCUM00016229, LANCUM00016241, LANCUM00016256,  
LANCIUM00016257, LANCUM00016260, LANCUM00016261, LANCUM00016264,  
LANCIUM00016267, LANCUM00016268, LANCUM00016292, LANCUM00016316,  
LANCIUM00016317, LANCUM00016341, LANCUM00016342, LANCUM00016366,  
LANCIUM00016368, LANCUM00016436, LANCUM00016437, LANCUM00016448.

Defendants further state that many (and potentially all) of the elements of each of the claims of the '433 patent had been conceived by no later than April 2019, but they are still investigating

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

the exact date(s) and circumstances of conception of each of these elements. Similarly, Defendants are still investigating the exact date(s) and circumstances regarding reduction to practice of each specific claim element of the '433 patent, but state that each of the claimed inventions in the '433 patent were reduced to practice by no later than October 28, 2019, the date Provisional Application No. 62/927,119 was filed with the United States Patent and Trademark Office.

Pursuant to Fed. R. Civ. Prod. 33(d), Defendants have produced and will be producing documents further evidencing conception and reduction to practice of the inventions claimed in the '433 patents. Defendants will further supplement this response identifying conception/reduction to practice related documents with particularity (*e.g.*, by Bates number).

**SECOND SUPPLEMENTAL RESPONSE TO INTERROGATORY NO. 3:**

Subject to and without waiving the foregoing General and Specific Objections, and incorporating by reference the above answer and supplemental answer to this Interrogatory, Defendants further object to this Interrogatory to the extent it seeks information after October 28, 2019—the date Provisional App. No. 62/927,119 (the provisional from which the '433 Patent claims priority) was filed. Nonetheless, Defendants provide a response through December 4, 2019—the date U.S. Application No. 16/702,931 (the application resulting in the '433 Patent) was filed. Defendants further state that the development of the inventions that became the '433 Patent resulted from Lancium's long history and deep experience relating to controlling electrical loads, which is further explained below to provide additional context for the inventions that became the '433 Patent. As is set forth below, certain of the claim limitations (*e.g.* "set of computing system, wherein the set of computing systems is configured to perform computational operations using

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

power from a grid,” “monitoring a set of conditions,” “a remote master control system positioned remotely from the set of computing systems,” “the remote master controls system is a mobile computing device,” “the set of conditions monitored by the control system comprises a price of power from the power grid and a global mining hash rate and a price for cryptocurrency,” and “identifying information about the set of computing systems”), standing alone, were conceived and/or reduced to practice in 2018 and early-to-mid 2019, whereas it is presently understood that other limitations (*e.g.*, those limitations relating to “power option agreements,” “power option data,” “responsive to receiving the power option data, determining a performance strategy ...”), and/or combinations of the limitations were conceived and reduced to practice between approximately August 2019 and October 2019. A historical timeline is reproduced below with reference to exemplary documents. Defendants further state that their investigation into the conception and reduction of the inventions of the ’433 Patent remains ongoing and, accordingly, reserve their right to further supplement their Answer if additional information is obtained.

As set forth above, Lancium was founded in 2017 to, among other things, create software and intellectual property solutions that enable more renewable energy on the nation’s power grid. Lancium began to fulfill this purpose almost immediately. For example, by at least November 2017, Lancium had been recognized as “developing deployable/dispatchable load products that both take advantage of negative prices and can be demand response resources and curtail under negative pricing.” *See, e.g.,* LANCIUM00025159. Lancium recognized, at this time and continuing into 2018, that power grids suffered from selective excessive power and heavy ramping needs, which contributed to instability and volatility of the grids. Lancium also recognized that large loads, for example, industrial users, could not absorb and drop very large loads quickly. Lancium responded by developing flexible datacenters and technology permitting their flexible

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

datacenters to act as large-scale participating rampable loads, including using excess power for mining cryptocurrency and considering load response requirements. Lancium would install flexible datacenters that could operate intermittently and absorb or drop load nearly instantly, thus solving the slow ramping problem of large loads. These flexible datacenters could take advantage of changes in power pricing by utilizing power during periods of negative/low power prices (*e.g.*, using excess power for mining cryptocurrency) and/or by selectively running older generation mining equipment. The flexible datacenters could sit on the grid (*e.g.*, as a participating load for an Independent System Operator and/or for HVAC) or behind the fence (*i.e.*, behind the meter). Lancium also recognized the need to protect their innovative approach to grid stability and renewable energy growth through patent protection. *See, e.g.*, LANCIUM00025166, LANCIUM00028002, LANCIUM00016437, LANCIUM00016448, LANCIUM00027639.

Throughout 2018, Lancium continued development of its flexible datacenters (which they also called rampable datacenters) with a focus on wind power as the renewable energy source. During this period, Lancium reviewed historical power pricing and considered power price in their datacenter power utilization decisions, and other conditions such as the projected hashrate of the rampable datacenters and the global hashrate. *See, e.g.*, LANCIUM00020038, LANCIUM00028284, LANCIUM00030255. For example, by at least February 2018, Lancium had developed proposals for wind farm installation of their flexible/rampable datacenters, including transformer connections, auxiliary support power, modular datacenters, metering, internet connectivity, supervisory control and data acquisition (“SCADA”) control systems, load break switches, and low-voltage distribution power modules for the datacenters. *See, e.g.*, LANCIUM00027779, LANCIUM00027787, LANCIUM00027788. Lancium also educated itself on the energy market and necessary regulatory requirements, and developed strategies for



ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

integrating its rampable datacenter within the regulatory requirements of power markets, including installation of interruptible loads, installation of behind-the-meter loads, power purchasing and scheduling directly or through intermediaries (*e.g.*, NYPSC certified ESCO; ERCOT Load Serving Entity). *See, e.g.*, LANCIUM00019986. At this time, Lancium was also working on developing frequency response functionality, including consideration of battery storage systems participating in demand response and frequency response. LANCIUM00033410, LANCIUM00018285.

By no later than March 2018, Lancium was designing the computing system arrangements for their rampable datacenters, including considerations of networking, internet connectivity, and remote monitoring. *See, e.g.*, LANCIUM00024942. Lancium, by this time, had conceived of the ability to ramp the flexible datacenters to absorb and drop power within 5 minute windows. Lancium's further had conceived that its flexible datacenters would be operated remotely via a Network Operations Center ("NOC") and could respond to signals from grid operators (*e.g.*, an ISO) and/or from a power generator. Lancium's also had conceived using NOC software to control their flexible datacenters with fast ramping capability using both manual and automatic control to place the flexible datacenters into various power consumption states, while also considering location, power pricing, and utilization. LANCIUM00027983. Also, at least as of this time, Lancium was aware of real-time energy pricing and ancillary services (*e.g.*, Reg-Up, Reg-Down, Responsive Reserve Service, and Non-Spin). *See, e.g.*, LANCIUM00018226, LANCIUM00018247.

By no later than April 2018, Lancium had conceived of flexible datacenter loads in the 1MW to 100MW+ range with the ability to ramp within seconds. For example, Lancium conceived of software with the ability for: (i) remote monitoring, where wind site deployments were centrally monitored from the Lancium NOC; (ii) configurable algorithms that allowed for the

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

shifting of power to hardware / applications that would earn the highest margin for a given MW at a given point in time; (iii) real-time price telemetry where data feeds from grid operators, meteorological services and wind customers allowed for rapid load response by Lancium's flexible datacenters; and (iv) reporting, where Lancium's hosting customers could access a wealth of information on equipment performance and uptime. *See, e.g.,* LANCIUM00016268. Lancium also began discussions with a contractor (TAS) to build their modular flexible datacenter containers, which would include smart breakers. *See, e.g.,* LANCIUM00024923.

During May 2018, Lancium continued to iterate Lancium's flexible datacenter containers. Also, on May 1, 2018, Lancium registered as an Independent Market Information System Registered Entity in ERCOT. *See, e.g.,* LANCIUM00034972. In June 2018, Lancium continued work on fast power ramping, with a focus on increasing the speed at which Lancium could ramp up power consumption by the miners. *See, e.g.,* LANCIUM00015160. And, by no later than July 2018, under the control of Lancium's proprietary software solution, Lancium flexible datacenters could ramp or shed 80% of their load in under two minutes with the balance managed in under five minutes. *See, e.g.,* LANCIUM00033404. As of this time, GlidePath had sent Lancium wind site power production history so that Lancium could begin a financial analysis for installing Lancium flexible datacenters at GlidePath wind farms. *See, e.g.,* LANCIUM00030319, LANCIUM00030321.

By no later than August 2018, Lancium had contracted with third parties to manage buildout of flexible datacenter installation projects, including the McAdoo wind farm site and the Lancium Thomas Road R&D center. Additionally, Lancium had engaged another contractor (JVD) to iterate and build their modular flexible datacenter containers. *See, e.g.,* LANCIUM00016854. Lancium was also making arrangements for a demonstration of their

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

technology, including: issuing instructions to miners; simulated remote control of multiple flexible datacenter sites; simulated software presentation of current power pricing, miner availability, miner activity status, historical hashing performance, historical power cost, and historical economic outcome; a flexible datacenter container demonstration unit; and load ramping based on changes in power price and changes in power generation. *See, e.g.,* LANCIUM00015148. And, by at least September 2018, Lancium was in talks with multiple power entities for installation of the Lancium flexible datacenters at power entity wind farm sites. The first flexible datacenter container (built by JVD in accordance with Lancium's design) was delivered, energized, and operational, and Lancium also continued development and design specifications on iterations of its container design. Lancium's NOC buildout was nearly complete and the proprietary Lancium software for remotely controlling the flexible datacenters was operational. Lancium had successfully ramped miners in a full power cycle in under 5 minutes, with ramp down in under 2 minutes and ramp up in under 4 minutes. *See, e.g.,* LANCIUM00014628.

At least as early as October 2018, Lancium continued to investigate Load Serving Entities and External Load Serving Entities in ERCOT. *See, e.g.,* LANCIUM00034154. Lancium also continued to iterate multiple flexible datacenter container designs, as well as SCADA, PLC, and instrumentation architecture designs for containers and site buildings. LANCIUM00025026. Lancium also had conceived of an electro-mechanical switching control with load ramping based on requirements received from the grid manager, as opposed to simply the price of power. Such functionality included: receiving instruction from the grid manager to change power, determining how to change the power, determining the rate/period of power change, communicating the change (*e.g.,* via an instruction), causing the miners to ramp up or down, and confirming the outcome. *See, e.g.,* LANCIUM00025024. Lancium also continued to develop its control software functionality,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

which included consideration of conditions such as: power (LMP) price, Lancium hashrate, network hashrate, Bitcoin price, grid load forecast and other grid statistics, power availability, and miner states/statuses. *See, e.g.,* LANCIUM00018261. Lancium also continued to innovate its software-controlled fast ramping (*e.g.*, PAR4 testing of ramping speed; replacing shell scripts with broadcast mechanism for faster on/off capabilities; miner frequency control; miner mode (state) control; performance strategy determination to meet load; and other control, alert, and reporting functions), overall system design, and high-heat tolerance modular containers. *See, e.g.,* LANCIUM00016219, LANCIUM00025030, LANCIUM00024898, LANCIUM00024896. In fact, as of October 2018, Lancium had invested over \$770,000 in R&D infrastructure at its Houston facility, over \$165,000 for designing its first modular container, and over \$100,000 on developing its software, with an anticipated further spend of \$340,000 on software development in the next two months. LANCIUM00021489. Also, around this time, Lancium had filed numerous patent applications covering Lancium innovation (*see, e.g.,* LANCIUM00020935), including WO 2019/139632 (“the ’632 Application”).

By at least November 2018, Lancium had introduced ERCOT to its technology for ramping datacenters and its positive potential impact on grid stability and renewable energy generation. *See, e.g.,* LANCIUM00034153, LANCIUM00034099, LANCIUM00034224. Lancium also continued its iterations of container design and site design for customer site installation (*see, e.g.,* LANCIUM00024992), and completed an analysis of integrating its flexible datacenter technology at GlidePath’s windfarm site using the SPSHANSFORDUNEXELON4\_WIND\_RA EXELON4 LMP node for power pricing. *See, e.g.,* LANCIUM00018299. In addition, Lancium was developing performance strategies to hit a target load (*e.g.*, Lancium continued to innovate its software-controlled fast ramping (*e.g.*, 90 second ramp up; communications between box control

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

and NOC control; miner operational state considerations; Lancium algorithms and PID calculations for performance strategy to meet load; data reporting and structures; logging; databases for status and metrics; performance strategy analytics and AI; operational modes; price data requests), overall system design, and high-heat tolerance modular containers). *See, e.g.*, LANCIUM00024888, LANCIUM00024886, LANCIUM00021635, LANCIUM00024878, LANCIUM00024875, LANCIUM00024877, LANCIUM00024872, LANCIUM00024874.

In December 2018, Lancium provided a term sheet to GlidePath to construct and operate its flexible datacenters at a GlidePath windfarm site with automatic curtailment of power delivery to the flexible datacenters when LMP power pricing exceeds a threshold value. *See, e.g.*, LANCIUM00018254, LANCIUM00018255. Lancium also continued to innovate its software-controlled fast ramping (*e.g.*, preparing control narrative; site SCADA design; container SCADA design; PLC design; receiving maximum load setpoint from site generator; internal processes and algorithms for performance strategies to manage sub-module activity to maintain site load below maximum load setpoint; simultaneous local and remote control), overall system design (*e.g.*, power transmission; site installation designs; power skids; full and partial load shedding within specified time intervals), and high-heat tolerance modular containers (*e.g.*, container design, cooling; fire suppression, power bar design, safety, increasing miner density; sensors; high temperature operation testing of miners). *See, e.g.*, LANCIUM00025008, LANCIUM00015260, LANCIUM00015265, LANCIUM00015304, LANCIUM00015330, LANCIUM00015339, LANCIUM00015451, LANCIUM00024984, LANCIUM00024976.

Lanium continued to innovate in 2019. For example, at least by January 2019, Lancium continued to innovate its software-controlled fast ramping (*e.g.*, preparing control narrative; communication links between Lancium SCADA and power provider SCADA; metered load

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

reading; other load readings; remote management of computational processing within each distributed computing module to control the amount of power consumed by sub-module equipment within the module; local module control of breakers; power provider control of main breaker; site control PLC automatic monitoring of hard load limit and directing responsive breaker opening when threshold is exceeded; automatically determining and executing a performance strategy for reducing load when the load limit is exceeded, including by managing computational processing (*i.e.*, a performance strategy for staying below a target load)), overall system design (*e.g.*, power skids), and high-heat tolerance modular containers (*e.g.*, cooling). *See, e.g.*, LANCIUM00024976, LANCIUM00024964, LANCIUM00026194, LANCIUM00015129, LANCIUM00025034.

By at least February 2019, Lancium provided details about its innovative, interruptible, responsive load technology to ERCOT for a specific site. *See, e.g.*, LANCIUM00030411, LANCIUM00030412. Lancium also continued to innovate its software-controlled fast ramping (*e.g.*, updating control narrative; miner firmware improvement for faster ramping; software and firmware for more granular power control of ASICs, hashcards and servers; improved frequency control of individual ASICs, hash cards and servers to better optimize power control), overall system design (*e.g.*, power skids; site network and PLC specifications), and high-heat tolerance modular containers (*e.g.*, fan motor control; power bars; improved density of packaging configurations for ASICs, hashcards and servers; constructability review of multiple current container design concepts). LANCIUM00024952, LANCIUM00026181, LANCIUM00024916, LANCIUM00024918, LANCIUM00024946. By the end of February 2019, Lancium had preliminary discussions regarding installation of the Lancium flexible datacenters with owners/developers of at least 15 energy provider projects. *See, e.g.*, LANCIUM00014929.

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

In March 2019, Lancium continued to innovate its software-controlled fast ramping (*e.g.*, testing modified firmware to enable lower power modes and more granular control; coordinated load management; site-wide load management; SCADA communications for real time and historical power utilization; soft load control to manage electrical load utilization to desired or permissible levels; hard load control for main breaker trip; automated control system for coordinated load management based on signals received from the power provider, wherein the power provider can update specific control system signals which are passed via secure communications link, received by the Lancium site controller and evaluated to trigger automated actions to manage site load; receiving load limit setpoints and compliance period signals and determining a performance strategy to meet the setpoint within the compliance period, including through the automated management of computational activity and/or breaker trip), overall system design (*e.g.*, power skids; site network and PLC specifications, site PLC design including receipt of control/status signals from power provider, communication of load limits, main breaker management, local and remote control via SCADA system; python code for reading module PLCs; meter data communications), and high-heat tolerance modular containers (*e.g.*, electrical module design and module control drawings are submitted for procurement; evolving structural designs; fan control design; sensor design). *See, e.g.*, LANCIUM00026158, LANCIUM00015068, LANCIUM00024571, LANCIUM00024608. Thus, by March 2019, Lancium had conceived of, receiving signals, responsively determining a performance strategy, and then, in response to a lowered setpoint signal, reducing load below a threshold within a certain compliance time period, or, in response to a raised setpoint signal, determining a performance strategy and raising the load to just below the threshold. Lancium was also iterating communications strategies at this time. *See, e.g.*, LANCIUM00024426; *see also* LANCIUM00024428, LANCIUM00024608,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00026145, LANCIUM00024571, LANCIUM00024475, LANCIUM00025888, LANCIUM00025848. Lancium also continued to progress towards commercial deployment during this period as evidenced by its provision of term sheets to GlidePath for sale of flexible datacenter containers and for hosting. *See, e.g.*, LANCIUM00018264.

In April 2019, and perhaps earlier, Lancium participated in meetings with ERCOT and a Lancium wind farm partner to address questions about how to meter Lancium's innovative technology at a power generation site. *See, e.g.*, LANCIUM00033839. Thereafter, because Lancium was “working on unique solutions that do not neatly conform to established utility regulations and operating protocols,” Lancium requested ERCOT's assistance in navigating certain ERCOT regulations and ERCOT support granting exemptions and drafting rule/protocol changes to supersede exemptions in order to implement Lancium's technology. *See, e.g.*, LANCIUM00033804, LANCIUM00033810. Lancium, continued to innovate its software-controlled fast ramping (*e.g.*, Lancium “Brain” as NOC control; coordinated load management; further development of strategies for automated load decrease and increase; iterating performance strategies for obtaining/using LMP), overall system design (*e.g.*, module and site PLC design, including removing module PLCs in favor of site PLC and/or NOC control; NOC communications; power skids; I/O configurations and interoperability; direction of module-level equipment response in relation to site-wide load management requirements; development of in-house NOC-based IT solutions for SCADA functionality instead of third-party SCADA software), and iterations of its high-heat tolerance modular containers (*e.g.*, new rack designs; power distribution; multiple vendors still under consideration for multiple container designs; module I/O configurations; fire suppression, sensors; PLC conversion to Lancium Brain; new fabrication drawings). *See, e.g.*, LANCIUM00024423, LANCIUM00026635, LANCIUM00025780,



ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00026294, LANCIUM00024914, LANCIUM00019586, LANCIUM00024891,  
LANCIUM00026218, LANCIUM00026222, LANCIUM00024363, LANCIUM00026203,  
LANCIUM00033479, LANCIUM00030608. Lancium also continued site design discussions with  
GlidePath. *See, e.g.*, LANCIUM00023786, LANCIUM00019586. Lancium also continued to  
invest in R&D and file patent applications to protect its inventions. *See, e.g.*,  
LANCIUM00033518, LANCIUM00033519.

By at least May 2019, ERCOT recognized that Lancium's behind-the-meter technology is  
“not a typical configuration” and “created a need for metering data to support multiple processes”  
(*e.g.*, a new means of metering). *See, e.g.*, LANCIUM00033802. During this time, Lancium  
continued working with stakeholders and developing the integration of its flexible datacenter  
technology with grid operators and power generators. *See, e.g.*, LANCIUM00033804,  
LANCIUM00033802, LANCIUM00035092. And Lancium discussed with various third parties  
Lancium's fast ramping technology in conjunction with behind-the-meter connections, ERCOT's  
ERS program, and deployment of Lancium's technology as an ERCOT Load Resource. *See, e.g.*,  
LANCIUM00035304 (attachment NDA); LANCIUM00035266; LANCIUM00035267;  
LANCIUM00033799, LANCIUM00033753, LANCIUM00033754. Lancium also retained a  
power consultant and continued to integrate its flexible datacenters into demand response  
programs, including the process of qualifying its load-ramping technology as an ERS participant  
and as a Load Resource (requiring day-ahead power bids, instantaneous curtailment, registration  
as a Resource within ERCOT, 2-second demand data metering, and employment of under-  
frequency relay control), interacting with a QSE and integration of grid frequency response  
technology. *See, e.g.*, LANCIUM00026299, LANCIUM00026300, LANCIUM00035204,  
LANCIUM00035218, LANCIUM00035206, LANCIUM00035210, LANCIUM00035217,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00035195, LANCIUM00035161, LANCIUM00035156, LANCIUM00035123,  
LANCIUM00035109, LANCIUM00035104, LANCIUM00035103, LANCIUM00030681,  
LANCIUM00030682. Also, in May 2019, Lancium continued to innovate its software-controlled fast ramping (*e.g.*, advancing site-wide coordination of load management actions by Lancium Brain, including receipt of control/status signals from a power provider and real-time site power utilization in order to trigger automated actions; automated control logic for determining performance strategies; automated opening and closing of individual module breakers; performance strategies employing software instructions to adjust computational activity for each computing rack across a site thereby managing total electrical load utilization to desired or permissible levels; employment of miner idle state to permit fast load ramp up; triggering hard load control when site load is greater than internal load limit by more than a configurable threshold or for longer than a configurable threshold value; setting internal load limits to communicated load limit setpoints within a communicated compliance period; flexible clocking ability), overall system design (*e.g.*, consideration of site I/O aggregator to replace control-logic PLCs; updated power skid quotes; new 35kV interconnection skid concepts; control and communications schema), and high-heat tolerance modular containers (*e.g.*, automated fan response, including when load limiting is active; removal of module PLCs in favor of remote-only management by Lancium Brain; consideration of module I/O aggregator to replace control-logic PLCs; revision of module design due to miner shelf redesign; submission of design changes to JVD). *See, e.g.*, LANCIUM00024314, LANCIUM00021740, LANCIUM00025690, LANCIUM00026321, LANCIUM00024228, LANCIUM00024229, LANCIUM00024223, LANCIUM00024225, LANCIUM00016897, LANCIUM00033268, LANCIUM00025697, LANCIUM00025691.

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

Lancium also continued development of a high-level draft Operational Controls Overview for a specific windfarm site within ERCOT in May 2019. The Overview provided a description of Lancium load ramping technology specific to the wind farm site. Level of power delivery, power consumption, and rate of power change would be managed by a collaborative daily/hourly communication process between Lancium and the power provider and supported by pre-arranged mutual operational planning. Lancium described control methodologies for its operation of miners in flexible datacenters, where Lancium controlled the miners as individual devices and groups of devices, and large groups of miners were installed in multiple prefabricated flexible datacenters identified as Distributed Compute Modules (DCM). The operations were served by main site power and auxiliary power (*e.g.*, behind-the-meter and grid power). Ramp time was targeted at less than 15 seconds for HASH-to-STANDBY (*i.e.*, ramp load down) and less than 30 seconds for STANDBY-to-HASH (*i.e.*, ramp load up). Lancium employed miner hash rate control as one means of varying load during HASH. The Lancium Brain used performance strategies to automatically control power consumption based on Locational Marginal Price (“LMP”), among other signals, *See, e.g.*, LANCIUM00014475, LANCIUM00033777, LANCIUM00033755, LANCIUM00033758. And Lancium continued discussions with GlidePath for operation of a third-party datacenter container at a GlidePath site served by Lancium power skids and under Lancium Brain control. *See, e.g.*, LANCIUM00019783, LANCIUM00019785. Lancium offered to show GlidePath Lancium’s R&D center with 2MW of compute power and to provide a demonstration of Lancium’s load ramping technology. *See, e.g.*, LANCIUM00018274.

By at least June 2019, Lancium was continuing to work towards integrating its fast ramping technology into ERCOT’s ERS program, including efforts to qualify Lancium’s R&D center as a Load Resource, efforts to qualify a Lancium wind farm site for ERS, and continued discussions

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

with its power consultant and a QSE about applying Lancium's technology towards demand response, Load Resource, and ERS opportunities. *See, e.g.,* LANCIUM00035072, LANCIUM00035008, LANCIUM00035017, LANCIUM00035019, LANCIUM00035001, LANCIUM00035011, LANCIUM00035012, LANCIUM00035010, LANCIUM00035009, LANCIUM00034665, LANCIUM00034668, LANCIUM00034649, LANCIUM00034646, LANCIUM00034644, LANCIUM00034645, LANCIUM00034647, LANCIUM00034648, LANCIUM00034608, LANCIUM00034609, LANCIUM00034679, LANCIUM00034678, LANCIUM00034682, LANCIUM00034683, LANCIUM00024125, LANCIUM00024126, LANCIUM00024127, LANCIUM00024128, LANCIUM00033069, LANCIUM00033072, LANCIUM00033071, LANCIUM00033070, LANCIUM00033073, LANCIUM00034680, LANCIUM00033066, LANCIUM00033068, LANCIUM00034750, LANCIUM00034743, LANCIUM00034744. Lancium also continued to innovate its software-controlled fast ramping (*e.g.*, miner power management, automation, monitoring and control, including miner frequency control, very rapidly and automatically spinning cryptocurrency servers up and down based on power availability and price, optimizing individual miner frequency based on power conditions, and monitoring power price, BTC price, hashrate, and miner state; Lancium Fit product branding), overall system design (*e.g.*, always-on power connections and infrastructure; removing controls from module PLC in favor of centralized control; power skid design iterations; site controller and network design; site design; iterations of control narrative / functional description), and iterations of its high-heat tolerance modular containers (*e.g.*, cooling control; increased power capacity per container (3.9MW); power channel design). *See, e.g.,* LANCIUM00034656, LANCIUM00034659, LANCIUM00025603, LANCIUM00025578, LANCIUM00025588, LANCIUM00025600, LANCIUM00025598, LANCIUM00025591, LANCIUM00021666,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00027515, LANCIUM00027643, LANCIUM00027735, LANCIUM00025573,  
LANCIUM00025576, LANCIUM00025565, LANCIUM00025550, LANCIUM00025555,  
LANCIUM00025537, LANCIUM00025541, LANCIUM00025546, LANCIUM00033266,  
LANCIUM00024188, LANCIUM00024190, LANCIUM00024217, LANCIUM00024218.

Additionally, Lancium worked with stakeholders to develop and advance regulatory and protocol exemptions and changes that would be necessary to integrate its fast-ramping load technology into the ERCOT power grid. *See, e.g.,* LANCIUM00034643, LANCIUM00034607, LANCIUM00034601, LANCIUM00034603, LANCIUM00034604, LANCIUM00034684.

In July 2019, Lancium continued working towards integrating its fast ramping technology into ERCOT's ERS program, including efforts to qualify Lancium's R&D center as a Load Resource, and continued discussions with its power consultant and a QSE about applying Lancium's technology towards demand response, Load Resource, and ERS opportunities. *See, e.g.,* LANCIUM00030572, LANCIUM00030573, LANCIUM00030616, LANCIUM00030620, LANCIUM00030631, LANCIUM00034726, LANCIUM00030454, LANCIUM00030457, LANCIUM00034736, LANCIUM00030527, LANCIUM00030529, LANCIUM00030596, LANCIUM00033261, LANCIUM00033264, LANCIUM00033265, LANCIUM00025624, LANCIUM00030835. Lancium also continued to innovate its software-controlled fast ramping (*e.g.*, consideration of a new hashrate metric), overall system design (*e.g.*, site layouts; network designs; power system modeling; utility application), and iterations of its high-heat tolerance modular containers (*e.g.*, revisions related to new V-box design; power channel design; power density calculations and alternate equipment density; analysis of various I/O aggregator options; fabrication decisions). *See, e.g.,* LANCIUM00025668, LANCIUM00025675, LANCIUM00025677, LANCIUM00025680, LANCIUM00025685, LANCIUM00025628,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00025635, LANCIUM00025639, LANCIUM00027799. Additionally, Lancium worked with stakeholders to develop and advance regulatory and protocol exemptions and changes that would be necessary to integrate its fast-ramping load technology into the ERCOT power grid. *See, e.g.,* LANCIUM00034729, LANCIUM00034731, LANCIUM00034688, LANCIUM00034990, LANCIUM00034963, LANCIUM00034940, LANCIUM00035284, LANCIUM00034927, LANCIUM00034932, LANCIUM00034921, LANCIUM00034923, LANCIUM00034916, LANCIUM00034877, LANCIUM00034883, LANCIUM00034868, LANCIUM00034853, LANCIUM00034858, LANCIUM00034831, LANCIUM00034821, LANCIUM00034772, LANCIUM00033707. Lancium also continued discussions with GlidePath for operation of a third-party datacenter container at a GlidePath site served by Lancium power skids and under Lancium Brain control. *See, e.g.,* LANCIUM00019196. Lancium also continued to pursue opportunities outside of ERCOT. *See, e.g.,* LANCIUM00021548, LANCIUM00021557, LANCIUM00021567, LANCIUM00029864.

By at least August 2019, Lancium qualified Lancium's R&D center as a Load Resource, continued working towards qualifying a Lancium wind farm site as a Load Resource and/or for ERS participation, and continued discussions with its power consultant and a QSE about further applying Lancium's technology towards demand response, Load Resource, and ERS opportunities. Lancium began participating in ERCOT demand response revenue generation at its R&D center via Lancium's QSE's Load Resource program. Lancium also adjusted its economic curtailment planning to assure that they consumed the obligated load they were awarded for each period. Additionally, Lancium executed a new addendum for fixed-price power purchasing, allowing Lancium to participate in energy arbitrage at its R&D center. Lancium incorporated into its revenue model decision making: (i) computing revenue plus demand response revenue, versus,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

(ii) economic dispatch revenue through arbitrage. *See, e.g.,* LANCIUM00028482, LANCIUM00033064, LANCIUM00033065, LANCIUM00030838, LANCIUM00028485, LANCIUM00033062, LANCIUM00024122, LANCIUM00033055, LANCIUM00033240, LANCIUM00030839 (spreadsheet attachments LANCIUM00030840, LANCIUM00030841, LANCIUM00030842), LANCIUM00030782, LANCIUM00033215, LANCIUM00024173, LANCIUM00029321, LANCIUM00018672. Lancium also continued to innovate its software-controlled fast ramping (*e.g.*, operations control), overall system design (*e.g.*, site layouts), and high-heat tolerance modular containers (*e.g.*, scope changes; panel design; structural design; 2MW module designs issued for construction; 4MW V-box iterations; miner density designs; demo box reconfiguration plans; removal of evaporative cooler). *See, e.g.,* LANCIUM00019208, LANCIUM00019212, LANCIUM00019217, LANCIUM00019222, LANCIUM00019227, LANCIUM00019125, LANCIUM00019130, LANCIUM00019139, LANCIUM00019143, LANCIUM00019151, LANCIUM00019155, LANCIUM00018898, LANCIUM00018904, LANCIUM00025517, LANCIUM00025518, LANCIUM00025419, LANCIUM00025420, LANCIUM00025496, LANCIUM00019105, LANCIUM00019109, LANCIUM00019116, LANCIUM00019124. Additionally, Lancium worked with stakeholders and hired a consultant to analyze, develop, and advance the regulatory and protocol exemptions and changes that would be necessary to integrate its fast-ramping load technology into the ERCOT power grid. *See, e.g.,* LANCIUM00034586, LANCIUM00034587, LANCIUM00033660, LANCIUM00033662, LANCIUM00033672, LANCIUM00033656, LANCIUM00034755, LANCIUM00033645, LANCIUM00033648, LANCIUM00033628, LANCIUM00033632, LANCIUM00033629, LANCIUM00033617. Lancium also continued discussions with GlidePath for operation of a third-party datacenter container at a GlidePath site served by Lancium power skids and under

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

Lancium Brain control. *See, e.g.,* LANCIUM00016879, LANCIUM00016880, LANCIUM00016881, LANCIUM00016882, LANCIUM00016883.

By at least September 2019, Lancium integrated its fast-ramping technology into ERCOT's ERS program, and continued working towards qualifying a Lancium behind-the-meter wind farm site as a Load Resource and/or for ERS participation, and continued discussions with its power consultant and a QSE about further applying Lancium's technology towards demand response, Load Resource, and ERS opportunities. *See, e.g.,* LANCIUM00018824, LANCIUM00018825, LANCIUM00025401, LANCIUM00025404, LANCIUM00025405, LANCIUM00033158, LANCIUM00024131, LANCIUM00024136, LANCIUM00024138, LANCIUM00033533, LANCIUM00033539. Also, at this time, Lancium understood that it might be able to qualify as a Controllable Load Resource under ERCOT's Controllable Load Resource program, and Lancium began investigating how to apply Lancium's technology to ancillary services (*e.g.*, NSPIN, RRS) as a CLR, how to qualify implementations of its technology as a CLR, and the economic viability of CLR participation. Lancium understood that CLR had existed for five years in ERCOT, that only one entity had tried to qualify, and that the entity failed. Lancium further understood it would have to follow ERCOT signals sent to a SCADA system (*e.g.*, such as the one installed for its Load Resource qualification) and use those signals to adjust load, all of which Lancium believed it could automate and integrate into its Lancium technology. *See, e.g.,* LANCIUM00033222, LANCIUM00024131, LANCIUM00021587, LANCIUM00030803, LANCIUM00031182, LANCIUM00031183. Lancium was also continuing to participate in ERCOT demand response revenue generation at its R&D center via Lancium's QSE's Load Resource program and also participating in power arbitrage.



ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

By September 2019, Lancium could ramp loads in seconds, had 2.3MW of fast-ramping load participating in LR and ERS at its R&D center, and was planning 10MW-36MW of behind-the-meter Lancium technology going live at the Invenenergy McAdoo windfarm by December 2019. *See, e.g.,* LANCIUM00024138, LANCIUM00021587. More specifically, for McAdoo, Lancium was continuing final development and planning, including: site and electrical preparation (power, electrical interconnects, transformers, protection and control); V-Box final design and construction; IT infrastructure loading; power operations plans for communications and dynamic response; and on-site testing and commissioning of ramping load technology. *See, e.g.,* LANCIUM00018910, LANCIUM00018927. At this time, Lancium also continued to innovate in clean compute module integration, wind generator integration, and power trading integration with its Load Resource integration (*e.g.*, evaluating economic considerations; demonstrating sub 10 second ramping ability; maintaining ancillary service award loads while participating in power trading), software-controlled fast ramping, overall system design, and high-heat tolerance modular containers. *See, e.g.,* LANCIUM00033194, LANCIUM00033143, LANCIUM00033474, LANCIUM00018824, LANCIUM00018825, LANCIUM00025404, LANCIUM00025405, LANCIUM00025398, LANCIUM00025400, LANCIUM00033158, LANCIUM00033222, LANCIUM00025385, LANCIUM00025386, LANCIUM00025394. Additionally, Lancium worked with stakeholders and its consultant to analyze, develop, and advance the regulatory and protocol exemptions and changes that would be necessary to integrate its fast-ramping load technology into the ERCOT power grid. *See, e.g.,* LANCIUM00033539.

By October 2019, Lancium investigated economic considerations of various qualifications, programs and methodologies to which it thought it could apply its technology, including ERS, 4CP avoidance, and ancillary services. LANCIUM00020782, LANCIUM00023630,

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

LANCIUM00030948, LANCIUM00030644, LANCIUM00031207, LANCIUM00030779, LANCIUM00030781, and LANCIUM00033094. Additionally, Lancium continued to work with stakeholders and its consultant to analyze, develop, and advance the regulatory and protocol exemptions, approvals, and changes that would be necessary to integrate its fast-ramping load technology into the ERCOT power grid. LANCIUM00033607, LANCIUM00033609, LANCIUM00032857, LANCIUM00033600, LANCIUM00033603, LANCIUM00033583, LANCIUM00033587, LANCIUM00034466, LANCIUM00034504, LANCIUM00034516, LANCIUM00034517, LANCIUM00034522, LANCIUM00034523, LANCIUM00034209, LANCIUM00034207, LANCIUM00033560, LANCIUM00033565, LANCIUM00030495, LANCIUM00030507, LANCIUM00030514, LANCIUM00030516, LANCIUM00030497, LANCIUM00030511, LANCIUM00033121. For McAdoo, Lancium was continuing final development and planning, including: site control server. LANCIUM00025237. Lancium continued to invest in R&D throughout 2019 (*see, e.g.*, LANCIUM00033518, LANCIUM00033519), and to protect the technology it invented by filing patent applications, including U.S. Provisional Application No. 62/927,119, the application from which the '433 Patent claims priority.

Lancium presently believes that the full combination of elements claimed in the '433 Patent were conceived between August 2019 and October 2019. For example, as set forth above, Lancium presently believes it conceived of means to apply its fast-ramping datacenter technology to ERCOT load management programs, such as participation in ancillary services such as RRS and NSPIN, around August 23, 2019. Also, with respect to controlling their fast-ramping datacenter technology, Lancium conceived of the combination of receiving power option data as recited, *e.g.*, in Claim 1, determining a performance strategy for a set of computing systems as

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

recited, *e.g.*, in Claim 1, and providing instructions to the computing systems as recited, *e.g.*, in Claim 1, around this time as well. *See, e.g.*, LANCIUM00032863, LANCIUM00032864, LANCIUM00019937, LANCIUM00021608, LANCIUM00030943, LANCIUM00021609, LANCIUM00021600, LANCIUM00021626, LANCIUM00031222, LANCIUM00031214, LANCIUM00021624, LANCIUM00021628, LANCIUM00028860, LANCIUM00030570, LANCIUM00021964. Lancium also conceived of providing instructions to the set of computing systems to perform one or more computational operations based on the foregoing performance strategy around this time. Lancium also believes that constructive reduction to practice occurred no later than October 28, 2019—the date Provisional Patent Application 62/927,119 was filed.

By no later than November 2019, Lancium moved to expedite CLR qualification of its technology. *See, e.g.*, LANCIUM00031216, LANCIUM00031220, LANCIUM00031226, LANCIUM00031178, LANCIUM00030947, LANCIUM00031212, LANCIUM00031213, LANCIUM00030790, LANCIUM00030791, LANCIUM00034267, LANCIUM00034269, LANCIUM00030590, LANCIUM00032631. Lancium also continued to work with stakeholders and its consultant to analyze, develop, and advance the regulatory and protocol exemptions, approvals, and changes that would be necessary to integrate its fast-ramping load technology into the ERCOT power grid, including as a CLR. LANCIUM00034351, LANCIUM00034342, LANCIUM00034344, LANCIUM00034347, LANCIUM00034309, LANCIUM00034283, LANCIUM00034284, LANCIUM00030590, LANCIUM00032918, LANCIUM00034247, LANCIUM00034250, LANCIUM00034253, LANCIUM00034257, LANCIUM00034261.

In December 2019, Lancium continued to advance CLR qualification of its technology, investigate the economic considerations of participating in ancillary services, and work with stakeholders and its consultant to analyze, develop, and advance the regulatory and protocol

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

exemptions, approvals, and changes that would be necessary to integrate its fast-ramping load technology into the ERCOT power grid, including as a CLR. LANCIUM00030752, LANCIUM00031206, LANCIUM00032673, LANCIUM00032674. On December 4, 2019, Lancium filed U.S. Application No. 16/702,931 which eventually issued as U.S. Patent No. 10,608,433.

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

Dated: December 23, 2021

BARNES & THORNBURG LLP

/s/ Chad S.C. Stover

Chad S.C. Stover (No. 4919)  
1000 N. West Street, Suite 1500  
Wilmington, Delaware 19801-1050  
Telephone: (302) 300-3474  
E-mail: chad.stover@btaw.com

Mark C. Nelson (admitted *pro hac vice*)  
2121 N. Pearl Street, Suite 700  
Dallas, TX 75201  
Telephone: (214) 258-4140  
E-mail: mark.nelson@btlaw.com

Adam M. Kaufmann (admitted *pro hac vice*)  
Dana Amato Sarros (admitted *pro hac vice*)  
One North Wacker Drive, Suite 4400  
Chicago, IL 60606  
Tel: (312) 214-8319  
E-mail: adam.kaufmann@btlaw.com  
E-mail: dana.sarros@btlaw.com

*Attorneys for Lancium LLC, Michael T.  
McNamara, and Raymond E. Cline Jr.*

ATTORNEYS' EYES ONLY – HIGHLY CONFIDENTIAL –  
SUBJECT TO PROTECTIVE ORDER

**CERTIFICATE OF SERVICE**

Please take notice that the undersigned hereby certifies that on December 23, 2021 a copy of ***Defendants' Second Supplemental Response to Plaintiffs' Interrogatory No. 3*** was served on all counsel of record by electronic mail:

Andrew C. Mayo  
Ashby & Geddes  
500 Delaware Avenue, 8th Floor  
P.O. Box 1150  
Wilmington, DE 19801  
Email: [amayo@ashbygeddes.com](mailto:amayo@ashbygeddes.com)

Benjamin T. Horton  
John R. Labbe  
Raymond R. Ricordati III  
Chelsea M. Murray  
Marshall, Gerstein & Borun LLP  
233 South Wacker Drive  
6300 Willis Tower  
Chicago, IL 60606-6357  
Email: [bhorton@marshallip.com](mailto:bhorton@marshallip.com)  
Email: [jlabbbe@marshallip.com](mailto:jlabbbe@marshallip.com)  
Email: [rricordati@marshallip.com](mailto:rricordati@marshallip.com)  
Email: [cmurray@marshallip.com](mailto:cmurray@marshallip.com)

/s/ Chad S.C. Stover  
Chad S.C. Stover (No. 4919)